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THE EFFECTS OF GREENWASHING ON CONSUMER BEHAVIOR

Study of the effects of greenwashing on green consumer confusion, green perceived risk and green trust.

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International Business
Bachelor's Thesis
Supervisor: Jaywant Singh
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ABSTRACT OF
BACHELOR'S THESIS

Author: Anna Kinnunen
Title of thesis: The Effects of Greenwashing on Consumer Behavior

Date: 9 April 2020
Degree: Bachelor of Science in Economics and Business Administration
Supervisor: Jaywant Singh

Objectives

The main objectives of this study were to examine the effects of greenwashing on consumer behavior. More specifically, to explore the relationships between greenwashing and green consumer confusion, green perceived risk and further, green trust. These constructs have not been studies among Finnish consumers who have purchased 'green' products, and this study seeks to fill that gap in the research of consumer behavior.

Summary

First, literature on greenwashing, green consumer confusion, green perceived risk and green trust was reviewed. This thesis attempts to test the effects of greenwashing on these constructs. The focus of this study is on Finnish consumers' who have bought products that are classified as 'green'. Five hypotheses were studied by conducting and analyzing an online survey.

Conclusions

The study revealed that greenwashing has a positive effect on consumers' green consumer confusion and green perceived risk, and a negative effect on green trust. In addition, green consumer confusion and green perceived risk have a negative mediating effect on green trust.

Key words: *Greenwashing, Green Marketing, Green Consumer Behavior, Green Consumer Confusion, Green Perceived Risk, Green Trust*

Language: English

Grade:

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1. Introduction

As the concern about environmental issues such as climate change, extinction of species and sea-level rise has risen over the past decades, consumers have become more interested in diminishing the impact of their consumption on the environment (Chen and Chang, 2013). Many consumers are interested in consuming environmentally less detrimental goods. This has created a market for environmentally friendly products and services (Chekima et a. 2015), and also the need for green marketing. The “green trend” has become a phenomenon in the marketplace, as companies have begun to answer to the demand of the market. Many companies are investing in green initiatives and recognizing the benefits of becoming more environmentally friendly (Lu et al, 2013). Countless green goods and services have been developed, from eco-fuel to environmentally friendly meat and dairy alternatives.

The green trend has gained attention and popularity in the corporate world, as companies increasingly recognize that it is their obligation to be socially responsible. Company research of large Finnish corporations in 2019 (OP:n suuryritystutkimus 2019/ OP large corporation research 2019) shows that a majority (56%) of Finnish companies think that it is the responsibility of their company to solve important social issues. Almost 93% of the companies see responsible business actions towards environmental and social issues as an emerging competitive advantage, and 65% see the actions and prevention of climate change as a business opportunity for their business. This demonstrates that at least in the Finnish corporate world social responsibility and green values are emerging fast, and the modern way of thinking is creating new opportunities for businesses to take advantage of green marketing.

Some companies, however, try to gain a competitive advantage of the green trend by communicating positive information about the environmental performance of the company, while the reality is different (Lyon and Maxwell, 2011). This is referred to as greenwashing. Companies engage in greenwashing to create an overly positive

corporate image for the consumers and society (Lyon and Maxwell, 2011). Greenwashing is problematic, because deceiving consumers about the company's environmental performance diminishes the consumers' ability to trust the communication of companies presenting green claims, and therefore, might harm the trust towards the whole green segment (Polonsky et al, 2010).

Gleim & Lawson (2014) found that one of the most prevalent predictors of green purchase behavior is the consumer's understanding of the effects of their personal behavior. If the consumer perceives that their personal choices do not matter, they are unlikely to purchase environmentally friendly products (Gleim & Lawson, 2014). Thus, greenwashing would affect consumers who are aiming to purchase green products and view that their individual choices affect the environment.

1.1 Research Topic

The effects of greenwashing on consumer behavior have been previously studied: Chen & Chang (2013) studied the effects of greenwashing on green consumer confusion, green perceived risk, and green trust. The authors found that greenwashing is reducing trust towards green claims, as consumers view the claims as ambiguous and deceptive. They also found that greenwashing increases green confusion and green perceived risk. Thus, consumers are confused by green claims that do not have sufficient proof or have ambiguous information, which in turn decreases their trust towards the product in question.

However, these constructs have not been previously studied among other than information and electronic products consumers in Taiwan, which creates a gap in the research of consumer behavior. This research extends the previous study by Chen and Chang (2013) by studying the hypotheses on western culture. Due to cultural differences, the results might vary in different countries. Studying the framework in another culture might confirm the results and make the theoretical framework more robust. This thesis is also expanding the previous study by testing the framework for different industries. Greenwashing can and does exist in different industries and products. Therefore, studying the hypotheses only among information and electronic products consumers is not comprehensive enough to make confident conclusions.

Consumers might have different perceptions and involvedness in different product categories, which can have an effect on the results. Studying the framework on different industries would make the results universal and more robust. Consequently, this paper would like to fill this gap in the research of consumer behavior by studying the framework in the context of different culture and industries.

This thesis aims to fill the research gap by studying Finnish consumers of different green product categories using the previously developed framework by Chen & Chang (2013). This thesis aims to research the relationship between greenwashing and green consumer confusion, green perceived risk and green trust among Finnish consumers. The relationship between these constructs is tested empirically.

1.2 Research Objectives

This thesis seeks to address the following research objectives:

RO1: Investigating the impact of greenwashing on green trust, green consumer confusion, and green risk.

RO2: Investigating the impact of greenwashing on Finnish consumers who consume products that claim to have environmental benefits.

RO3: Investigating whether greenwashing affects environmentally conscious consumers more/less/differently than environmentally indifferent consumers.

The following sections discuss the literature around these subjects and define them in further detail.

2. Literature Review and Hypotheses Development

To consider the phenomenon of greenwashing, should the definition of green marketing first be discussed. Green marketing, also referred to as eco-marketing,

social marketing, environmental marketing, organic marketing, and sustainability marketing, has no universal definition according to Martínez et al. (2019). However, a common characteristic in the definitions is the inclusion of environmental awareness in marketing messages (Martínez et al., 2019). According to Paço et al. (2009) green marketing is a process that combines profitability and sustainability by recognizing, satisfying and anticipating the needs of the society and consumer. The function of green marketing is to emphasize the importance of environmental protection in the context of consumption (Moravcikova et al., 2017). According to Polonsky (2011), the goal of green marketing among other things is to improve the natural ecosystem while increasing social wellbeing and the quality of life of the consumers. This is to assist consumers to understand the problems regarding product consumption, and to recognize that consumers can affect environmental pollution by altering their consumption choices. Furthermore, green marketing increases consumer awareness of environmental protection, and thus increases overall environmental benefits (Fliegelman, 2010).

The growing concern for the environment especially in the times of climate change has created a demand for environmentally friendly products. Consumers have recognized the need to alter their consumption choices due to environmental issues (Chen & Chang, 2013). As a result, consumers are attempting to become more responsible for environmental protection by consuming environmentally less harmful goods (Chen & Chang, 2013). Through green marketing, companies take advantage of the green trend by promoting environmentally and socially responsible products and services to consumers. Additionally, companies can increase the overall social wellbeing and shape the market condition to an environmentally friendly direction. However, Polonsky (2011) argues that some companies take advantage of the green marketing phenomenon only to increase their market share and gain competitive advantage by addressing the environmental needs of the consumers.

2.1 Definitions of Greenwashing

Environmental concern is making the consumers alter their consumption choices to reduce the negative effect of their consumption on the environment (Perera et al,

2016). As the interest towards environmentally friendly products has increased, some companies have felt the pressure to gain the attention of green consumers. Companies value green consumers and therefore seek to connect the image of their products with green values to generate more profits (Furlow, 2010). Correa et al. (2017) argue that companies want to portray that their company is in line with what society expects and views as acceptable by associating their products with environmental and social values. However, some of the attempts to portray a green image are characterized as greenwashing (Furlow, 2010).

Delmas et al. (2011) define greenwashing as two simultaneously occurring company practices: poor environmental performance and positive communication about good environmental performance. Parguel et al. (2011), on the other hand, define greenwashing as the act of misleading consumers regarding the environmental attributes of the good or the practices of the company. Companies involve in greenwashing to enhance consumer trust by portraying a more environmentally friendly image than what is accurate (Laufer, 2003); it is a way of advertising in which the green marketing is deceptive (Martínez et al. 2019). Modifying the production more sustainable can be slow and expensive, leaving greenwashing an easily accessible solution to gain the attention of green consumers (Chen and Chang, 2013).

To establish transparent and trustworthy marketing practices, just claiming to be environmentally friendly is not enough; sufficient evidence and facts must be revealed for the consumer to be able to make an informed purchase decision (Hoedman 2002). As Pagotto (2013), cited in Matrínez et al. (2019: 5) explains, greenwashing is compromising the consumer's autonomy to make an informed choice. Greenwashing hides all the social, economic and environmental harm from the consumer by misleading the consumer to think that the negative effects of the production of the good are minor or even absent (Pagotto, 2013, cited in Martínez et al., 2019: 5).

According to Nguyen et al. (2019) consumers are increasingly skeptical towards firms that try to gain an advantage of the green movement. Loss of consumer confidence towards the environmental information communicated by companies is the main

problem in today's green marketing (Chen and Chang, 2013). Furlow (2010) states that greenwashing can have a profound negative impact on consumer confidence in green products, thus deteriorating the marketing for green products and services. The high number of false green marketing claims creates difficulties for green companies to stand out in the market as consumers worry about the contrast between the image and reality of green marketed products (Nguyen et al. 2019). Many green marketing claims are deceptive and ambiguous (Chen and Chang, 2013). Hamann and Kapelus (2004) argue that consumers rely on the information of the product delivered by the company's marketing messages. Therefore, if the claims are perceived to be deceptive, consumers cannot trust the product and the company, which leads to a failure to make the purchase decision, according to Chen and Chang (2013). Therefore, greenwashing is weakening the consumers' trust in green marketing and could be damaging to the green segment as a whole (Hamann and Kapelus 2004). Consequently, it is even argued that greenwashing might destroy the green market by causing consumer skepticism towards green products (Polonsky et al, 2010).

2.2 Consumer Behavior and Environmental Concern

This study investigates greenwashing in the context of consumer behavior; more specifically, the study aims to research the effects of greenwashing on green consumer confusion, green perceived risk, and green trust. The study examines how greenwashing affects consumers, as the greenwashing seeks to mold consumer perceptions of the company or product. Greenwashing can be described through intrinsic and communicative characteristics; the company distances itself from the truth by using communication to deceive and confuse the consumer (Jong et al. 2018).

Environmental concern is one of the main cognitive measures to predict green consumption behavior (Jaiswal and Kant 2018). Consumers who are concerned for the environment are more prone to seek green products and are often willing to pay a higher price for them (Gyader et al, 2017). Consumers seeking green products might

be more susceptible to greenwashing, as the communication of the company is the main source of information for the consumer (Hamann and Kapelus, 2004). On the other hand, if consumers perceive greenwashing, purchase intention and company image are negatively affected as the consumer is not able to trust the information provided by the company (Parguel et al, 2011). This is turn increases the possibility that the consumer cannot reach the purchase decision (Chen and Chang 2013).

However, Spack et al. (2012) found out that consumers are susceptible to the mere presence of green cues, regardless of the quality of the argument. This is positively affecting buying intention. Nature-evoking elements in marketing positively affect consumer's perception of the brand image (Parguel et al, 2015), thus suggesting that imaginary resembling nature, such as green color or nature-like symbols, affect consumers by creating an environmentally friendly resemblance in the mind of the consumer. With this, if the consumer does not perceive greenwashing and trusts the green claims, greenwashing can effectively increase the purchase intention of green consumers by integrating green cues to the marketing messages. Therefore, greenwashing might have a stronger effect on consumers who have strong environmental values, as they are more susceptible to respond to green cues and search for green products.

2.3. Green Consumer Confusion

As greenwashing is becoming more prevalent in today's green marketing, consumers are becoming increasingly skeptical towards companies that take advantage of the green trend (Nguyen, 2019). According to Chen et al. (2013), consumer recognition of greenwashing exists, which leads to suspicion towards green claims. As consumers perceive greenwashing, they begin to question the reliability of the marketing claims and become suspicious and confused, since they cannot tell whether or not the claim is true. Negative perceptions about greenwashing might impair consumers' attitudes towards a company that communicates green marketing claims (Peattie et al. 2009). Nguyen et al. (2019) found that skepticism towards environmental marketing claims is negatively related to a consumer's intention to buy

green products. Without confidence in the allegations, consumers fail to make a purchase decision (Chen and Chang, 2013). Lyon and Maxwell (2011) discovered that many consumers view green claims as marketing strategies, and therefore would not trust all of them.

Consumer confusion means the inability to form a coherent interpretation of the attributes of the product during the information processing procedure (Turnbull et al. 2000). Confusion arises when the consumer is restricted from the ability to correctly process information, according to Chen & Chang (2013). This might arise in situations where the consumer is attempting to comprehend a large amount of information, leading to an information overload (Mitchell et al, 2005) The more information the consumer is attempting to comprehend, the larger the possibility to experience information overload is (Mitchell et al., 2005). Langer et al. (2008) continue the discussion by stating that information overload caused too much information simultaneously could lead to consumer confusion. Too similar, too complex, too ambiguous and too much information about a product or service can cause the consumer to become confused (Mitchell and Papavassiviliou, 1999; Turnbull, 2000). Therefore, communicating vague green marketing claims leads to confusion and might impair the consumers' trust towards the company and the green segment as a whole.

Consumer confusion can arise in three types of trigger situations, argue Mitchell and Papavassiviliou (1999): the unclarity of information, the similarity of products and the over choice of products. Cryptic and false claims in marketing communication are unclear information, which can lead to consumer confusion (Mitchell, 1999). The confusion caused by the similarity of products arises when the available products have such similar attributes that the consumer is incapable to comprehend the difference between them (Mitchell, 1999). Over choice of products arises when there is too much relevant information available to assimilate (Mitchell, 1999). The saturated green segment might be a trigger for consumer confusion as many similar products claiming green attributes might lead to information overload and consumer confusion, as the consumer cannot process the reliability and differences of the products and their green attributes. As consumers are targeted by green claims from

multiple companies due to the popularity of the green trend, it can be difficult for consumers to assimilate all the relevant information.

Chen & Chang (2013, 491) define green consumer confusion as ‘‘consumer failure to develop a correct interpretation of environmental features of a product or service during the information processing procedure.’’ With this, the consumer is unable to correctly process the given information to comprehend the environmental benefits of the product. As stated before, the goal of greenwashing is to divert the attention of the consumer away from the negative environmental qualities that the company or good has; that is to shape the public image of the company in the eyes of the consumer (Martínez et al., 2019). When the consumer encounters ambiguous green claims that are not supported by sufficient factual evidence, the consumer becomes confused. This is because the consumer cannot be confident of the given information about the product or the company to decide whether or not to trust the green claims.

Greenwashing would make it more difficult for consumers to evaluate the actual greenness of products. This would lead to green consumer confusion, as consumers are unable to develop a coherent interpretation of the reliability of the green claims. Therefore, we reach the following hypothesis:

Hypothesis 1 (H1): Greenwashing is positively associated with green consumer confusion.

2.4 Green Perceived Risk

Peter and Ryan (1976) define perceived risk as the consumer’s subjective estimation of the possible consequences of wrong decisions. If the consequences of the purchase are uncertain, the consumer is encountering a risk when purchasing a good (Rao et al. 2007). As the consumer is making a purchase decision, they are evaluating the consequences that come with the purchase. A purchase decision is based on the consumer’s perception that the benefit gained from the good is more valuable than the financial loss of buying it. That being said, when purchasing a good

the consumer is willing to take the risk that the value of the good does not meet the expectation. The perceived risk affects the purchase decision (Aaker, 1996), as the consumer must perceive the risk to be at an appropriate level to accept it. If the risk is perceived too high, the consumer will not purchase the good because the perception of negative consequences is too evident (Peter and Ryan, 1996).

However, financial risk is not the only type of risk the consumer is engaging in. Jacoby and Kaplan (1972) propose that perceived risk consists of financial, psychological, physical, performance and social risk. Roselius (1971) proposed that as consumers are encountered with the perception of risk, they have four strategies of acting; “reduce the perceived risk by reducing the probability of purchase, change from one type of perceived loss to another whose tolerance is greater, postpone the purchase, buy the good and accept the unresolved risk.” Therefore, as Martínez (2019) argues, perceived risk can have a negative relationship with perceived benefit and customer satisfaction. The author continues the argument by stating that as the expected condition of purchase is assumed to be trust towards the product, greenwashing would have a negative influence on the consumer’s trust when perceived. This is because when the consumer is aware of the greenwashing, the perceived risk regarding the purchase increases.

Chen and Chang (2012: 506) define green perceived risk as “the expectation of negative environmental consequences associated with purchase behavior’’. The consumer acknowledges the possibility that the purchase has a negative environmental impact. Therefore, when making a purchase decision, the consumer is engaging in a risk that the product might not satisfy their green needs. The higher the risk is, the more uncertain consumer feels about making the purchase decision (Chen and Chang, 2013). Thus, the perceived risk would decrease the probability of reaching the purchase decision (Mitchell 1999). Chaudhuri (1997) argues that a strong association between negative consumption emotions and risk perception exists.

The consumers have recognized the need to alter their consumption choices and become more environmentally friendly, as environmental issues such as climate

change have emerged (Chen and Chang, 2013). The objective of the green consumer is to buy a product that meets the criteria of environmental attributes that the consumer has set. Chen and Chang (2013) state that as the green trend has become more prevalent, consumers experience higher green perceived risk as they have a higher concern for the environmental impacts of their consumption. As the consumer encounters greenwashing, they cannot be confident that the green claims are reliable and that the product satisfies their environmental needs, which leads to the increase of the green perceived risk (Gillespie, 2008). In this context, this study suggests the following hypothesis.

Hypothesis 2 (H2): Greenwashing is positively associated with green perceived risk.

2.5 Green Trust

As Chen and Chang (2013) state, greenwashing is a threat to the developing green market, as it can deteriorate the trust of the consumers towards sustainability initiatives. Horiuchi and Schuchard (2009), cited in Chen and Chang (2013) argue that greenwashing hinders the consumer's ability to recognize the impact of their consumption; the consumer is unable to realistically comprehend the environmental effects because greenwashing alleges that the impacts are smaller than what they actually are. Therefore, the consumer that chooses to believe the false green claims is under the impression that the impact of their purchase is more favorable than what it is. Greenwashing is diminishing the market share of legal green companies by saturating the market with deceptive green claims, which slows down the shift to a greener market condition (Polonsky et al. 2010).

Greenwashing results in skepticism towards environmental information revealed by the companies (Self et al. 2010). Furthermore, skepticism relates to the concepts of distrust and low trust (Nguyen, 2019). According to Hart and Saunders (1997), the core principle of trust is the optimistic anticipation of the behavior of the other party. Trust is the willingness to accept the vulnerability resulting from the positive expectations regarding the behavior of the other party (Rousseau et al. 1998).

Further, when a person trusts another party, they believe the other party based on the expectation that they are reliable, benevolent and able to act trustworthy (Ganesan, 1994).

Chen (2010, 309) defines green trust as “willingness to depend on a product or service based on the belief or expectation resulting from its credibility, benevolence, and ability about environmental performance’’. The consumer believes in the positive environmental performance and the credibility and benevolence of the acts of the company. As Horiuchi and Schuchard (2009), cited in Chen and Chang (2013), argue, if the majority of the companies made sufficient green initiatives and communicated about it truthfully and credibly, consumers would believe that the companies are indeed engaging in environmentally friendly activities, which would increase the green trust towards the green companies. However, the companies are often fabricating or exaggerating the environmental benefits of their products, which deteriorates the green trust towards the companies communicating green claims (Kalafatis and Pollard, 1999). As the main objective of green marketing is to acquire and maintain trusting customers (Lewandowska et al., 2017), the deterioration of trust might be detrimental for companies communicating green initiatives. Furthermore, Cherry and Sneirson (2011) argue that consumers are unwilling to establish long-term trust relationships with companies that greenwash their consumers. In this context, the study proposes the following hypothesis:

Hypothesis 3 (H_3): Greenwashing is negatively associated with green trust.

2.6 The Negative Effect of Green Consumer Confusion and Green Perceived Risk on Green Trust

As consumer confusion arises from information overload, confused consumers have a diminished ability to make rational purchase decisions (Mitchell and Papavassiliou 1999). The authors argue that confusion could lead to abandoning the purchase and not trusting the provider anymore. The confusion is making the purchase decision inefficient and frustrating for the consumers, as the state of confusion is associated with uncertainty, anxiety, puzzle, and indecision (Mitchell et al. 2005). Thus, the

negative emotions caused by consumer confusion are making the successful purchase decision less likely and negatively affecting the trust in the company.

Singh and Sirdeshmukh (2000) argue that consumer confusion aroused by misleading and ambiguous advertisements would deteriorate the trust of the consumer and raise their suspicion. Adversely, reducing consumer confusion would increase consumer trust according to Walsh et al. (2007). As the consumer understands the marketing messages and can decide that they are true and trustworthy, the consumer is more willing to trust the provider. Consumers are usually reluctant to trust a product that creates confusion for them (Mitchell and Papavassiliou 1999). Thus, consumer confusion has a significant negative effect on consumer trust (Walsh and Mitchell, 2010).

Consumers are beginning to question the motives of companies that are making the marketing too complex to understand, thus creating consumer confusion (Walsh and Mitchell, 2010). Thus, consumers are more hesitant to trust companies if they view green marketing claims as deceiving (Kalafatis and Pollard, 1999). The authors state that green consumer confusion is negatively associated with trust in green claims. Therefore, the more confused the consumer is about the green claims, the less green trust they have in the market (Chen, 2010). Referring to the discussed literature, the study proposes the following hypothesis.

Hypothesis 4 (H_4): Green consumer confusion is negatively associated with green trust.

As Peter and Ryan (1996) state, the perceived risk would negatively affect the consumer's purchase process as the consumer recognizes the possible negative consequences of the purchase. Consumers are prone to minimize the risk associated with the purchase rather than maximize the expected outcome (Mitchell 1999). Therefore, minimizing the risk of the purchase is even more important for the consumer than an excellent expected outcome. According to Wood and Scheer (1996) diminishing the perceived risk would lead to an increase in purchase probability. Chang and Chen (2008) continue the discussion by stating that reducing perceived risk would positively affect consumer trust.

Perceived risk greatly affects the customer's decision about whether or not to trust the product (Harridge-March, 2006). If the consumer perceives that the consumption choice might have negative and unexpected consequences, the consumer is unwilling to rely on the company. As Mitchell (1999) states, the consumer would not trust the product or the brand if they feel that there is a risk involved. Consequently, a decrease in perceived risk might increase consumer trust (Koehn, 2003). Thus, it is widely agreed in the prior literature that perceived risk negatively influences trust and that companies could increase customers' trust by decreasing perceived risk (Warrington et al. 2000; Chang and Chen 2008).

As the consumers seek to consume environmentally friendly products, the green perceived risk would lead to deterioration of green trust. As consumers experience green perceived risk, they are aware that the product that they are purchasing might not have the expected environmental benefits, thus the consumer cannot trust the green product. The perception of greenwashing increases the perception of green risk, and thus decreases green trust. As Gillespie (2008) states, green perceived risk about environmental consideration is negatively associated with trust towards green claims. Therefore, this study proposes the following hypothesis.

Hypothesis 5 (H_5) Green perceived risk is negatively associated with green trust.

As discussed in the previous sections, greenwashing has various effects on consumer behavior. Previous research shows that greenwashing positively affects green consumer confusion and green perceived risk, while negatively affecting green trust (Chen & Chang, 2013).

3. Methodology

Following the discussion in the previous sections, this thesis seeks to address the following research objectives:

RO1: Investigating the impact of greenwashing on green trust, green consumer confusion and green risk.

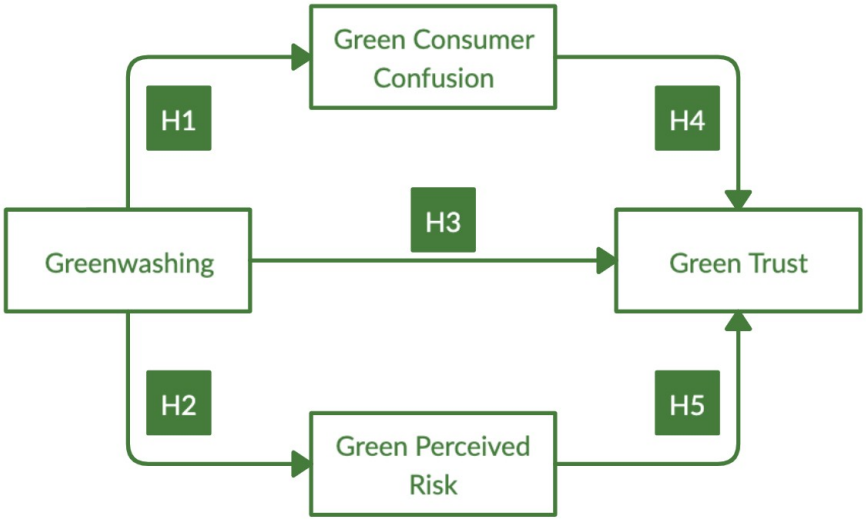
RO2: Investigating the impact of greenwashing on Finnish consumers who consume products that claim to have environmental benefits.

RO3: Investigating whether greenwashing affects environmentally conscious consumers more/less/differently than environmentally indifferent consumers.

The purpose of this study is to provide information on consumer behavior related to greenwashing among Finnish consumers. The findings could be significant for the marketing design of Finnish companies seeking to create marketing practices that are efficient and increase consumer satisfaction and trust. Furthermore, this study would like to increase and encourage transparent marketing and provide findings that would make benevolent marketing more intriguing for companies.

3.1 Conceptual Framework and Hypotheses

To investigate the research objectives this thesis proposes to use the following conceptual framework by Chen & Chang (2013):



As the suggested in previous sections, there is a gap in the research of consumer behavior. Based on the literature on greenwashing, green consumer confusion, green perceived risk, and green trust, five hypotheses were drawn to examine the potential effects of greenwashing on consumer behavior:

Hypothesis 1 (H1): Greenwashing is positively associated with green consumer confusion.
Hypothesis 2 (H2): Greenwashing is positively associated with green perceived risk.

Hypothesis 3 (H_3): Greenwashing is negatively associated with green trust.

Hypothesis 4 (H_4): Green consumer confusion is negatively associated with green trust.

Hypothesis 5 (H_5) Green perceived risk is negatively associated with green trust.

3.2 Questionnaire design

This thesis examines a consumer-level sample to verify the hypotheses and the framework. The research object of this study is Finnish consumers who have purchase experience on green marketed products. To examine the relationship between greenwashing and green consumer confusion, green perceived risk and green trust, a survey was conducted (Appendix 1). The survey was developed based on the previous research by Chen and Chang (2013) and aims to discover answers to the hypotheses and previously established research gap.

The survey was conducted online using Webropol. A pretest on 10 Finnish participants was conducted to test the clarity of the survey, and no changes were made. After the pretest the survey was published online using various platforms, including Aalto University distributing channels, What's App, Facebook, and Email. The study uses a convenience sample as the survey was distributed online through Aalto distributing channels and social media, which mostly consist of students and young, easily available participants.

To study the effects of greenwashing across various product categories, the participants were presented a list of product categories that were classified as 'green products' (Appendix 1). From these products, the participants were asked to identify all categories from which they have previously purchased green products. For this study, a green product is defined as a product that is believed to have environmental benefits. To examine the relationships between greenwashing, green consumer confusion, green perceived risk, and green trust, measures were conducted using the measures established by Chen and Chan (2013) (Table 1) and modified for the purposes of this research and the Finnish focus group (Table 2). The participants were asked to answer to claims about the green product that they have previously bought on a scale of one to seven (1= strongly disagree, 7= strongly agree). These questions measured the relationship between greenwashing and green confusion, trust and perceived risk according to the participant's perception of the consumed green product. To gain a view of the participants' environmental awareness, they were asked whether they identify as environmentally aware. This enables the research to look into any possible differences in the effects of greenwashing on consumers who are concerned about the environment to those who are not. Finally, the participants were asked about their demographic information, gender, age, and nationality.

Chen & Chang (2013) studied the framework on Taiwanese consumers with the following measures. The existing measures have been modified for the purposes of this research.

Original measures by Chen & Chang (2013)

Table 1

Greenwash	Green confusion	Green perceived risk	Green trust
Horiuchi and Schuchard (2009) and Laufer (2003) cited in Chen & Chang (2013; 494)	Walsh et al. (2007), Walsh and Mitchell (2010), cited in Chen &	Chen and Chang (2012), cited in Chen & Chang	Chen 2010, cited in Chen & Chang (2013; 495)

	Chang (2013; 494)	(2013;494)	
(1) This product misleads with words in its environmental features.	(1) Due to the great similarity of many products with respect to environmental features it is often difficult to detect this product.	(1) There is a chance that there will be something wrong with environmental performance of this product.	(1) You feel that this product's environmental reputation is generally reliable.
(2) This product misleads with visuals or graphics in its environmental features.	2) It is difficult to recognize the differences between this product and other products with respect to environmental features.	(2) There is a chance that this product will not work properly with respect to its environmental design.	(2) You feel that this product's environmental performance is generally dependable.
(3) This product possesses a green claim that is vague or seemingly un-provable.	(3) There are so many products you can purchase that you are really confused with respect to environmental features when purchasing this product.	(3) There is a chance that you would get environmental penalty or loss if you use this product.	(3) You feel that this product's environmental claims are generally trustworthy.

(4) This product overstates or exaggerates how its green functionality actually is.	(4) There are so many products that it is difficult to decide which one you should choose with respect to environ- mental features when purchasing this product.	(4) There is a chance that using this product will negatively affect the environment.	(4) This product's environmental concern meets your expectations.
(5) This product leaves out or masks important information, making the green claim sound better than it is.	(5) When purchasing this product, you rarely feel sufficiently informed with respect to environmental features.	(5) Using this product would damage your green reputation or image.	(5) This product keeps promises and commitments for environmental protection.
	(6) When purchasing this product, you feel uncertain about its environmental features.		

Measures modified for the purposes of this research:

Modified questions in red

Table 2

Greenwashing	Green Confusion	Green Perceived Risk	Green Trust
(1) This product misleads with words in its environmental features.	(1) Due to the similarity of many products with respect to environmental features it was difficult to choose this particular product.	(1) There is a chance that there is something wrong with the environmental performance of this product.	1) You feel that this product's environmental reputation is generally reliable.
(2) This product misleads with visuals or graphics in its environmental features.	2) It is difficult to recognize the differences between this product and other products with respect to environmental features.	(2) There is a chance that this product does not have the environmental features that were communicated.	(2) you feel that this product's environmental performance is generally dependable.
(3) This product possesses a green claim that is vague or seemingly unprovable.	(3) There are so many products for sale that you are confused about their environmental features when choosing a product.	Question removed; too ambiguous for the purposes of this study.	(3) You feel that this product's environmental claims are generally trustworthy.

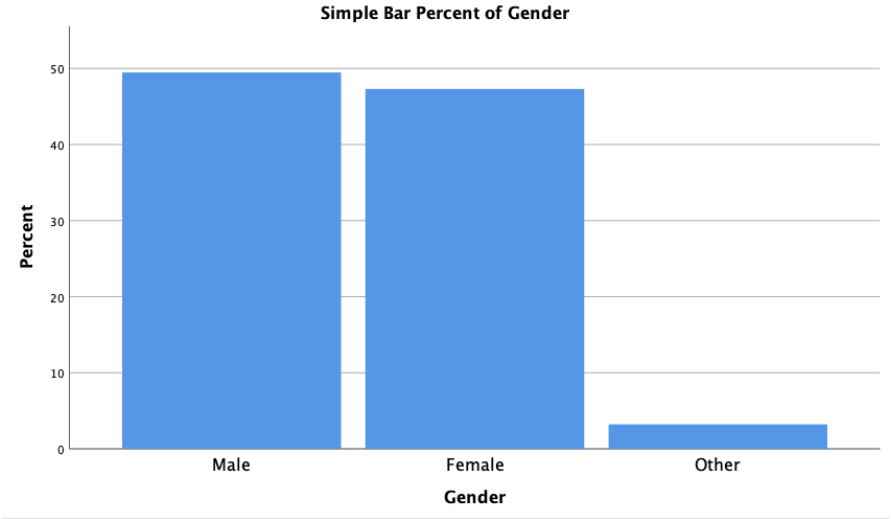
(4) This product overstates or exaggerates how its green functionality actually is.	(4) There are so many products that it is difficult to decide which one you should choose with respect to environmental features when purchasing this product.	(4) There is a chance that using this product will negatively affect the environment.	(4) This product's environmental concern meets your expectations.
(5) This product leaves out or masks important information, making the green claim sound better than it is.	(5) When purchasing this product, you did not feel sufficiently informed about its environmental features.	(5) Using this product would damage your green reputation or image.	(5) This product keeps promises and commitments for environmental protection.
	(6) You felt uncertain about the environmental features of this product when purchasing it.		

3.3 Sample

The survey was completed by 106 participants. Non-Finnish participants (n=14) were disregarded as the context of the study is Finnish consumers, leaving a final sample

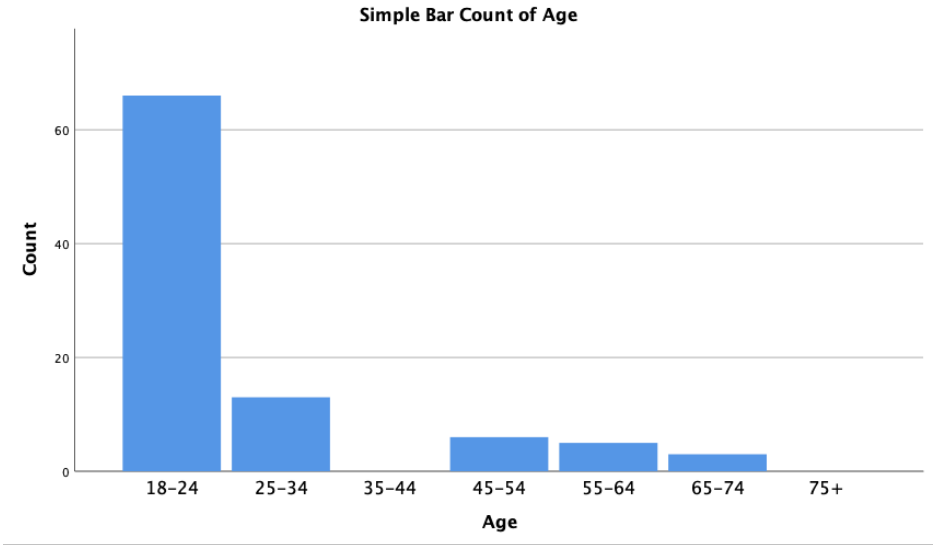
of n=93. The gender distribution of the Finnish respondents was very even as 50% of the respondents were male, 47% female and 3% other.

Graph 1: Gender Distribution



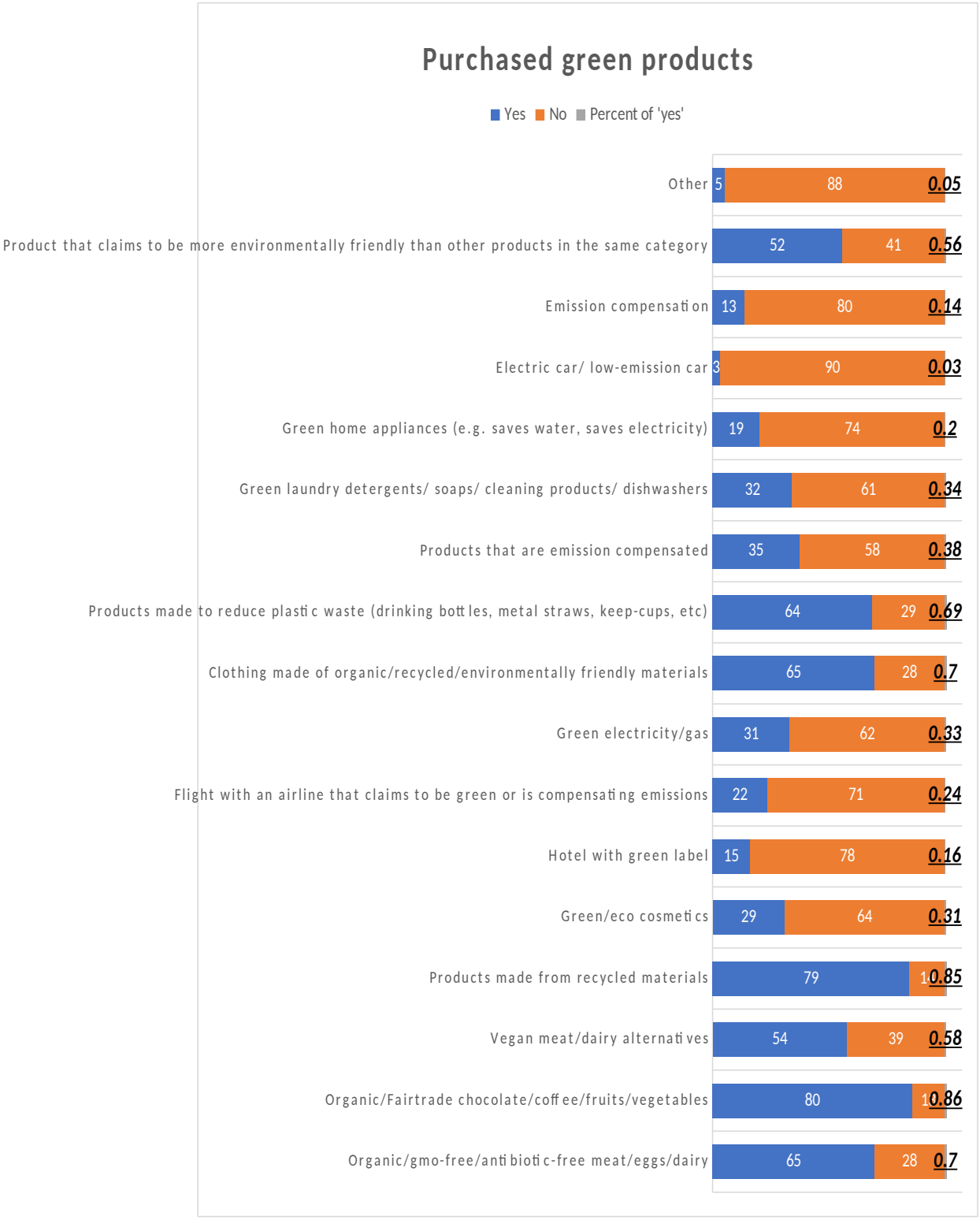
Age distribution of the respondents was not quite as evenly distributed, as 71% of the respondents were age 18-24, 14% were age 25-34, 0% were age 35-44, 7% were age 45-54, 5% were age 55-64 and 3% were age 65-74. It is no surprise that most of the respondents were young as the survey was distributed through social media and Aalto University platforms used mainly by young age groups. Especially bad representation of 35-44 with 0% is a clear limitation to this study as it is an age-group that is work-life and forms a large portion of consumption as the provider of many households.

Graph 2: Age Distribution



As described in previous sections, the participants were asked to identify the green products that they had purchased. Graph 3 presents both the categories of green products and the answers of the participants. The most often purchased green products were from the categories “Organic/ Fairtrade Chocolate/ Coffee/ Fruits/ Vegetables” purchased by 86,02% of the participants and “Products made from recycled materials” purchased by 84,95% of the participants. Only 3,23% had purchased a product from the category “Electric car/ Low-emission car”, which is natural considering the young age distribution of the participants. The option “other”, indicating that the purchased green product is not from one of the given categories, or that the participant had never purchased any product that could be considered green, was chosen only by 5,38%. This indicates that a large majority of participants could identify a previously purchased green product from the given categories.

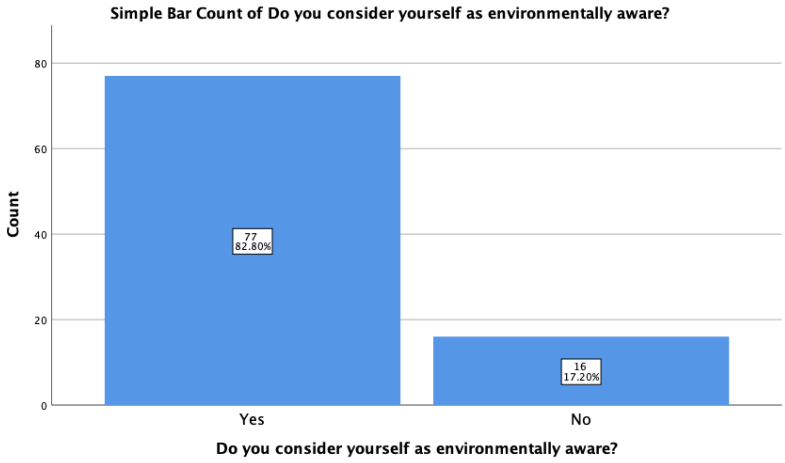
Graph 3: Purchased Green Products



The participants were asked whether they consider themselves as environmentally aware. 77 (82.80%) answered ‘yes’. This is a large majority, so it can be said that

the sample of this research viewed themselves as environmentally aware, which can increase the likelihood of purchasing environmentally friendly products.

Graph 4: Environmental awareness



4. Findings and Analysis

IBM SPSS Statistics software was used to code and analyze the collected data. The non-Finnish respondents (n=13) were removed from the dataset, after which the data (n=93) was downloaded to IBM SPSS Statistics software. The independent variable of this research was greenwashing, and the dependent variables were green consumer confusion, green perceived risk, and green trust. Reliability analysis was conducted for each scale and Cronbach's Alpha was used to determine the reliability of the item. Generally, the minimum requirement of Cronbach's alpha is 0.7 (Hair et al. 1998). The greenwashing scale consisted of 5 items (α =.882), the green consumer confusion scale consisted of 6 items (α =.803), the green perceived risk scale consisted of 4 items (α =.748), and the green trust scale consisted of 5 items (α =.877). The measurements of this study are acceptable in reliability as the Cronbach's alphas of all constructs are >.7.

Table 3: Number of Items and Cronbach's Alpha

Scale	Number of Items	Cronbach's Alpha
Greenwashing	5	.882
Green Consumer Confusion	6	.803
Green Perceived Risk	4	.748
Green Trust	5	.877

Descriptive statistics were derived to see the direction of the participants' answers. The participants were asked to answer the claims regarding a green product on a scale of 1 (Strongly Disagree) to 7 (Strongly Agree). Therefore, the median of the 7-point Likert type scale is the answer 4 (Neutral). By examining the means of the scales, it is clear that all scales have a median of over 4, which means that participants perceive greenwashing, green confusion, green risk, and green trust and generally agree with the presented claims. From the Pearson correlations of the scales, we can see that greenwashing and green consumer confusion and green perceived risk have a positive correlation (H1 and H2), while greenwashing and green trust, green consumer confusion and green trust and green perceived risk and green trust have negative correlations (H3, H4, and H5).

Table 4: Descriptive statistics: means, standard deviations and Pearson correlations of the subscales.

Subscale	Mean	Standard deviation	A) Greenwashing	B) Green Consumer Confusion	D) Green Perceived Risk
A) Greenwashing	4.353	1.266			
B) Green Consumer Confusion	4.441	1.124	.550 (H1)		
C) Green Perceived Risk	4.315	1.063	.665 (H2)		
D) Green Trust	4.587	.987	-.596 (H3)	-.434 (H4)	-.408 (H5)

Each of the five hypotheses was measured using linear regression analysis. This study uses an alpha level of .05 for all statistical tests to determine the significance of the relationship. Linear regression was used to test if greenwashing significantly predicted participant's green consumer confusion (H1). The results of the regression indicated that greenwashing explained 30.3% of the green consumer confusion ($R2=.303$, $F(1, 91) =39.530$, $p< .001$). Greenwashing significantly predicted green consumer confusion ($\beta= .488$, $t(91) = 6.287$, $p<.001$).

For the relationship of greenwashing and green perceived risk (H2), a significant regression equation was found ($F(1,91) =72.252$, $p<.001$) with R2 of .443. It was found that greenwashing significantly predicted green perceived risk with a positive relationship ($\beta=.559$, $t(91) = 8.500$, $p<.001$).

Greenwashing significantly predicted green trust (H3) with a negative relationship ($\beta=-.464$, $t(91) = -7.074$, $p<.001$). Greenwashing also explained a significant proportion of variance in green trust scores ($R2= .355$, $F(1,91) = 50.046$, $p<.001$).

For the H4 a significant negative relationship was found between green consumer confusion and green trust ($\beta=-.381$, $t(91) = -4.596$, $p<.001$). Greenwashing explained

a significant variance in green consumer confusion scores (R2= .188, F (1,91) =21.123, p<.001)

Green perceived risk significantly predicted green trust (β= -.379, t (91) = -4.266, p<.001). Green perceived risk predicted a significant variance in green trust (R2= .167, F (1,91) = 18.202, p<.001).

Therefore, H1, H2, H3, H4, and H5 are all supported in this study.

Table 5: (H1): **Greenwashing** is positively associated with **green consumer confusion.**

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin–Watson
1	.550[a]	.303	.295	.94352	1.851

a. Predictors: (Constant), Greenwashing

b. Dependent Variable: Confusion

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	35.191	1	35.191	39.530	.000[b]
	Residual	81.011	91	.890		
	Total	116.203	92			

a. Dependent Variable: Confusion

b. Predictors: (Constant), Greenwashing

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	2.315	.352		6.575	.000	1.615	3.014
	Greenwashing	.488	.078	.550	6.287	.000	.334	.643

a. Dependent Variable: Confusion

Table 6: (H2): **Greenwashing** is positively associated with **green perceived risk.**

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin–Watson
1	.665[a]	.443	.436	.79811	2.221

a. Predictors: (Constant), Greenwashing

b. Dependent Variable: Risk

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	46.023	1	46.023	72.252	.000[b]
	Residual	57.965	91	.637		
	Total	103.988	92			

a. Dependent Variable: Risk

b. Predictors: (Constant), Greenwashing

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	1.883	.298		6.323	.000	1.291	2.474
	Greenwashing	.559	.066	.665	8.500	.000	.428	.689

a. Dependent Variable: Risk

Table 7: (H3): **Greenwashing** is negatively associated with **green trust.**

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin–Watson
1	.596[a]	.355	.348	.79731	2.013

a. Predictors: (Constant), Greenwashing

b. Dependent Variable: Trust

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	31.815	1	31.815	50.046	.000[b]
	Residual	57.850	91	.636		
	Total	89.665	92			

a. Dependent Variable: Trust

b. Predictors: (Constant), Greenwashing

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	6.609	.297		22.215	.000	6.018	7.200
	Greenwashing	-.464	.066	-.596	-7.074	.000	-.595	-.334

a. Dependent Variable: Trust

Table 8: (H4): **Green consumer confusion** is negatively associated with **green trust.**

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin–Watson
1	.434[a]	.188	.179	.89426	2.215

a. Predictors: (Constant), Confusion

b. Dependent Variable: Trust

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.892	1	16.892	21.123	.000[b]
	Residual	72.773	91	.800		
	Total	89.665	92			

a. Dependent Variable: Trust

b. Predictors: (Constant), Confusion

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	6.280	.380		16.532	.000	5.526	7.035
	Confusion	−.381	.083	−.434	−4.596	.000	−.546	−.216

a. Dependent Variable: Trust

Table 9: (H_5) **Green perceived risk** is negatively associated with **green trust.**

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin–Watson
1	.408[a]	.167	.158	.90614	2.061

a. Predictors: (Constant), Risk

b. Dependent Variable: Trust

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.945	1	14.945	18.202	.000[b]
	Residual	74.719	91	.821		
	Total	89.665	92			

a. Dependent Variable: Trust

b. Predictors: (Constant), Risk

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	6.223	.395		15.765	.000	5.439	7.007
	Risk	−.379	.089	−.408	−4.266	.000	−.556	−.203

a. Dependent Variable: Trust

Table 10: Results of the structural model

Hypothesis	Proposed effect	Standardized slope (beta)	Results

H1	+	.488	H1 is supported
H2	+	.559	H2 is supported
H3	-	-.464	H3 is supported
H4	-	-.381	H4 is supported
H5	-	-.379	H5 is supported

4.1 Other findings

As discussed in the literature review, participant's perception of their environmental awareness might affect their consumption of green products, and thus their scores on the scales of greenwashing, green consumer behavior, green perceived risk, and green trust. 80.2% of the participants viewed themselves as environmentally aware. An independent samples t-test was performed on the scales and environmental awareness, and no significance was found ($p > 0.05$ for each scale). This is not surprising, as the sample size is relatively small with just 16 participants who do not view themselves as environmentally aware. The sample size is simply too small to draw any conclusions of the answer patterns of the participants who answered 'no' in contrast to those who answered 'yes'. In this research, there was no significant difference in the participant's scores on the four scales regardless if they considered themselves as environmentally aware or not.

5. Discussion and Conclusions

The main objective of this paper has been to explore the predicted effects of greenwashing on green consumer confusion, green perceived risk, and green trust. The research has been done from a producer's and a marketer's viewpoint, since encouraging the consumption of green products is beneficial for both the environment and environmentally responsible companies producing green goods. Decreasing greenwashing is suggested by the findings of this research to increase

the customers' green trust. Green marketing is more efficient and able to encourage green consumption when the consumers do not perceive greenwashing, green confusion, green risk or experience decreased green trust. Five hypotheses aimed to find out the relationship between the four scales, and the data-analysis proved the expected relationships significant. This section will provide further analysis of the results and discuss the limitations and implementations of this study.

5.1 Theoretical Contributions

The first research objective (RO1) of this study was to investigate the impact of greenwashing on green trust, green consumer confusion, and green risk. The findings of the study are clear, and all five hypotheses were proven to be correct. This research shows that greenwashing does not only increase the green consumer confusion and green perceived risk among consumers, it also decreases green trust. In addition, the results indicate that green consumer confusion and green perceived risk are negatively associated with green trust. Therefore, the research shows that green consumer confusion and green perceived risk partially mediate the negative relationship between greenwashing and green trust. This means that when consumers experience green consumer confusion and perceived risk due to greenwashing, they are likely to have less trust in the product or the provider. The findings are in line with the previous research by Chen and Chang (2013), thus further confirming the previous results and making the theoretical framework more robust.

The second objective (RO2) was to investigate the impact of greenwashing on Finnish consumers who have experience in consuming products that claim to have environmental benefits. This objective was met successfully, as the framework was tested on Finnish consumers who have experience in purchasing green products. The results indicate that greenwashing predicts green consumer confusion, green perceived risk and decreased green trust among Finnish consumers. This study extends from the previous study by Chen and Chang (2013) in Taiwan by confirming the framework in a different cultural setting. This increases the credibility of the results, as it proves that they can be applied in different cultures. Results also show

that the theoretical framework can be applied to different green product categories, compared to previous research that focused on information and electronic products. This is important because it makes the framework applicable to multiple green marketed industries.

This research successfully confirms the previous findings and framework by Chen & Chang (2013) to be true and significant among different green product categories and Finnish consumers. The results fill the suggested research gap and prove that the framework can be implemented across different green product categories.

The third objective (RO3) was to investigate whether greenwashing affects environmentally conscious consumers differently than environmentally indifferent consumers. In this study, there was no difference on the effects of greenwashing in the tested constructs. Also, the sample size was too small to explain any variation in the results with only 17 respondents who do not consider themselves environmentally conscious. However, according to secondary research discussed in previous sections, environmental concern is one of the main cognitive measures to predict green consumption behavior (Jaiswal and Kant 2018). As the communication of the company is the main source of information for the customer, environmentally conscious consumers who seek green products might be more susceptible to greenwashing (Hamann and Kapelus, 2004). Therefore, greenwashing might have a stronger effect on consumers who have are environmentally aware.

5.2 Implications for International Business

The goal of this research has been to present findings to support transparent green marketing. This paper wants to support businesses to opt for fair marketing policies that benefit the consumer, environment, and through the findings of this study, the business itself. Ambiguous and deceptive marketing does not benefit any stakeholders and can cause harm for the companies and the whole segment of green marketing in the long run. The problem with greenwashing is that the companies claim to be environmentally friendly but in fact, are not (Delmas et al.,

2011). The findings of this study are clear: greenwashing reduces trust towards the company and its products and can consequently harm the company. This is an important finding in the field of international business where managers are constantly looking for solutions to build a trusting, long-term customer base. This study suggests two ways for companies to reduce the negative consequences of greenwashing: reducing deceiving communication about environmental friendliness (reducing greenwashing) or changing the business to be environmentally friendly to meet the desired green image (green initiatives). In addition, this study suggests transparent marketing for gaining trust among consumers. These implications are discussed in the following sections.

5.2.1 Reducing Greenwashing

The main challenge for the companies is to increase green trust in the times when greenwashing is prevalent in the market, and the consumers are increasingly prone to perceive and react negatively to it. As discussed in the literature review, the main objective of green marketing is to acquire and maintain trusting customers (Lewandowska et al., 2017). The results of this research indicate that decreasing greenwashing would generate higher green trust, which in turn increases purchase probability. Consumers are unwilling to establish long-term trust relationships with companies that greenwash their consumers (Cherry and Sneirson (2011), thus reducing greenwashing would promote customer retention. Consumers who can trust the product, company, and marketing have greater customer satisfaction and willingness to form long-term customer relationships.

Reducing greenwashing would also decrease the levels of green consumer confusion and green perceived risk, which in turn would promote higher green trust. A decrease of greenwashing would decrease green perceived risk by enabling the product to better meet the consumer's expectations.

5.2.3 Green Initiatives

By adopting environmentally friendly initiatives companies can present green claims and practice green marketing while not engaging in greenwashing. The results of this study show that greenwashing harms consumer trust. However, presenting green claims that are clear, truthful and present sufficient proof increases trust towards the product as the consumer can believe the information. By increasing green initiatives companies are able to shift the market condition into more sustainable direction while maintaining consumer satisfaction and penetrating the green market. Adapting green initiatives also decreases green perceived risk, as the consumer does not perceive negative environmental consequences from the purchase. This enables companies to satisfy their customers' green needs, which increases customer satisfaction. Making initiatives towards sustainability and communicating about it with sufficient evidence may reduce the perception of greenwashing.

5.2.2 Transparent Marketing

Greenwashing is endangering the whole green segment, as consumers perceive that companies are deceiving with their green claims (Polonsky et al, 2010). If more companies practiced transparent and honest marketing, consumers would be better able to trust companies' green marketing messages. Transparent marketing would lower green perceived risk, as consumers would be able to trust that the product meets the expectation of environmental friendliness and thus, the purchase does not have negative consequences. Clear and honest marketing claims reduce green consumer confusion, as the consumer can understand and believe in the truthfulness of the claims. This, in turn, would promote green trust towards companies and the whole green segment.

5.3 Limitations

This research has a few limitations which might affect the results. These limitations should be taken into account when evaluating the credibility and universality of the results. Firstly, the size of the final sample (n= 93) is small, which lowers the

credibility and universality of the results. Also, the convenience sample produced a very skewed age distribution, which can affect the results. The majority (71%) of the respondents were in the age group 18-24. Therefore, the results might not be the same if the respondents were more evenly distributed across all age-groups. Young people might have a higher tendency to pay attention to environmental friendliness, as climate crisis is an important experience for generation Y. More participants from older age groups would be needed to be able to consider the findings universal.

It should be also noted that the focus of this research was on Finnish consumers, and thus English is the second language for the participants. While the level of English knowledge is high in Finland, it might cause some confusion or misinterpretation of survey questions. Because even a small misinterpretation can skew the answers, this should be considered as a limitation to the study.

5.4 Suggestions for Further Research

The goal of this research has been to continue and add to the previously done research by Chen & Chan (2013) by testing the existing framework on other products than the previously researched information and electronic products. The research gap has been filled, but further research is needed. The framework has been previously researched in Taiwan, and now in Finland. While these are two very different cultural settings, the framework could be studied in other countries in the future.

The results of this study are mainly based on the participant's perception of the honesty of the environmental claims of the product. It would be interesting to see if the product in question is greenwashed or a credible green product that has, for some reason, generated confusion, perceived risk and decreased the trust. In other words, it would be interesting to study how close to the reality the participant's perception of the product is. However, this is not an obstacle for this study as the results show that the scales are credible, meaning that if the participant had bought an actually green product, their scores on the scales were low because they had trust towards the product that was not a suspect to greenwashing. Therefore, a suggestion

for further research would be to examine the framework on specific products or product categories with clear product identification. Further, the framework could be examined in a contrast setting, where the sample would be divided into two groups; the other group would be exposed to a greenwashed product, and the other group would be exposed to an authentic green product. Then the difference in the responses to the four scales could be analyzed.

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7. Appendices

Appendix 1: Survey

Thesis survey

Informed Consent

This is a survey regarding greenwashing in day-to-day shopping. Participation in this survey is voluntary and takes about 4 minutes. The information gathered is confidential and will be used only for the purposes of the research for my bachelor's thesis. You will not be personally identified from answering the survey.

For further information and questions contact the author of this survey by email: anna.kinnunen@aalto.fi

Thank you for participating!

1. Below is a list of products that are believed to have environmental benefits and are classified as 'green products'. Please select the product/s that you might have purchased in the past. *

- [ ] Organic/gmo-free/antibiotic-free meat/eggs/dairy
- [ ] Organic/Fairtrade chocolate/coffee/fruits/vegetables
- [ ] Vegan meat/dairy alternatives
- [ ] Products made from recycled materials
- [ ] Green/eco cosmetics
- [ ] Hotel with green label
- [ ] Flight with an airline that claims to be green or is compensating emissions
- [ ] Green electricity/gas
- [ ] Clothing made of organic/recycled/environmentally friendly materials
- [ ] Products made to reduce plastic waste (drinking bottles, metal straws, keep-cups, etc),
- [ ] Products that are emission compensated
- [ ] Green laundry detergents/ soaps/ cleaning products/ dishwashers
- [ ] Green home appliances (e.g. saves water, saves electricity)
- [ ] Electric car/ low-emission car
- [ ] Emission compensation
- [ ] Product that claims to be more environmentally friendly than other products in the same category
- [ ] Other

Answer to these claims regarding the 'green' product you have bought. Answer on the scale from 1 to 7 from strongly disagree to strongly agree according to your own perception and knowledge of the product.

2. *

	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
The product you bought misleads with words in its environmental features. *	○	○	○	○	○	○	○
The product you bought misleads with visuals or graphics in its environmental features. *	○	○	○	○	○	○	○
The product you bought possesses a green claim that is vague or seemingly unproven. *	○	○	○	○	○	○	○
The product you bought overstates or exaggerates how its green functionality actually is. *	○	○	○	○	○	○	○
The product you bought leaves out or masks important information, making the green claim sound better than it is. *	○	○	○	○	○	○	○

3. *

	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
Due to the similarity of many products with respect to environmental features it was difficult to choose this particular product. *	○	○	○	○	○	○	○
It is difficult to recognize the differences between this product and other products with respect to environmental features. *	○	○	○	○	○	○	○
There are so many products for sale that you are confused about their environmental features. *	○	○	○	○	○	○	○
There are so many products that it is difficult to decide which one you should choose with respect to environmental features when purchasing the product. *	○	○	○	○	○	○	○
When purchasing the product, you did not feel sufficiently informed about its environmental features. *	○	○	○	○	○	○	○
You felt uncertain about the positive environmental features of the product when purchasing it. *	○	○	○	○	○	○	○

4. *

	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
There is a chance that there is something wrong with the environmental performance of the product. *	○	○	○	○	○	○	○
There is a chance that the product does not have the environmental features that were communicated. *	○	○	○	○	○	○	○
There is a chance that using the product will negatively affect the environment. *	○	○	○	○	○	○	○
Using the product would damage your green reputation or image. *	○	○	○	○	○	○	○

5. *

	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
You feel that the product's environmental reputation is generally reliable. *	○	○	○	○	○	○	○
You feel that the product's environmental performance is generally dependable. *	○	○	○	○	○	○	○
You feel that the product's environmental claims are generally trustworthy *	○	○	○	○	○	○	○
The product's environmental concern meets your expectations *	○	○	○	○	○	○	○
The product you bought keeps promises and commitments for environmental protection. *	○	○	○	○	○	○	○

6. Do you consider yourself as environmentally aware? *

- ◯ Yes
- ◯ No

7. Gender *

- ◯ Male
- ◯ Female
- ◯ Other

8. Nationality *

- ☐ Finnish
- ☐ Other, please specify

9. Age *

- ◯ 18-24
- ◯ 25-34
- ◯ 35-44
- ◯ 45-54
- ◯ 55-64
- ◯ 65-74
- ◯ 75+